1 Gyropress Method (Rotary Jack-in Method)

The Gyropress Method is a "reaction based" rotary jack-in method to install tubular piles with cutting bits with self-walking functions. The Gyropress Method enables tubular piles to be installed through existing structures or buried obstructions. Therefore, by this method, construction costs and time can be minimized simultaneously, due to the avoidance of enabling removal works.

Cutting Reinforced Concrete

The followings present cutting off performance through reinforced concrete (t = 80 cm, σck = 24 N/mm², D16@250 x 3 layers).

2 Applicable to 1,200mm and 1,500mm O.D. Tubular Pile

The F501-G1500 can install tubular piles (ø1200mm and 1500mm O.D.) and tubular sheet piles (ø1200mm and 1500mm O.D.) by changing only the Chuck jaws and Clamp jaws. Spacing between Clamps of the F501-G1500 can be adjusted by hydraulic cylinders at an optional distance.

3 Outstanding Environmentally-Friendly Design

**Low Emission Engine**

The Power Unit of the F501 is a new generation model and has environmentally-friendly specifications. It is designed with strict concepts for clean emissions with high combustion efficiency and GIKEN’s original hydraulic control technologies.

**Ultra Low Noise Level**

It clears allowable construction noise levels in many industrialised countries.

**Standard Application of Biodegradable Oil**

The F501 uses bio-degradable Piler Eco Oil and Piler Eco Grease. Hence, if hydraulic oil or grease is spilled into soil or water, there will be no environmental damage to the surrounding ecosystem. In addition, the machines are painted with TX-Free non-leaded paint. *Environmentally-friendly paint which does not contain toluene, xylene and lead-based pigment.

4 Scientific Execution of Press-in Work & Advanced IT Functions

**GIKEN IT System**

GIKEN’s engineers can monitor individual Silent Pilers, such as operating condition, maintenance records and location. Quick advice for any technical troubles is available promptly and appropriate information can also be provided to prevent troubles. *The system is not available in the countries where authorization for usage cannot be acquired.

**Press-in Monitoring and Data Logging System**

Press-in monitoring data can be used for quality control and information modelling of the foundation. Operators are able to keep working while checking data such as press-in force, auger torque, and working hours of press-in work, on a tablet or PC (both optional extras).
Silent Piler Model and Applicable Pile

<table>
<thead>
<tr>
<th>Tubular Pile</th>
<th>Tubular Sheet Pile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>Diameter</td>
</tr>
<tr>
<td>mm</td>
<td>mm</td>
</tr>
<tr>
<td>F301-G1000</td>
<td>600</td>
</tr>
<tr>
<td>F401-G1200</td>
<td>800</td>
</tr>
<tr>
<td>F501-G1500</td>
<td>1000</td>
</tr>
<tr>
<td>GRV2540</td>
<td>1200</td>
</tr>
<tr>
<td>1500</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
</tr>
</tbody>
</table>

Performance Comparison of Gyro Piler Models

With greater torque and chuck rotation speed, F501-G1500 is capable of installing longer tubular piles at a faster rate.

### Dimensions & Specifications

**Silent Piler Model F501-G1500**

- **Applicable Pile**: Tubular Pile Ø1200, 1500 mm
  - Tubular Sheet Pile Ø1200, 1500 mm
- **Max. Press-in Force**
  - with Chuck Rotation: 3360 kN
  - without Chuck Rotation: 2000 kN
- **Max. Extraction Force**
  - with Chuck Rotation: 3600 kN
  - without Chuck Rotation: 2600 kN
- **Chuck Rotation Torque**: 1.8 ~ 10.0 min⁻¹
- **Chuck Rotation Velocity**: 1.0 ~ 2.4 m/min
- **Applicable Pile Spacing**
  - 1200 mm: 1250 ~ 1825 mm
  - 1500 mm: 1550 ~ 1825 mm

**Control System**

- **Radio Control**
- **Self-Moving**

**Preliminary**

- **for Tubular Sheet Piles (Tubular Piles with external interlocks)**
- **optional Chuck jaws are required.**

*Excluding Mast Stage*

**Mast**

- **Mass**: 21750 kg

**Chuck**

- **Mass**
  - for 1200 mm: 22550 kg
  - for 1500 mm: 23850 kg

**Saddle**

- **Mass**
  - for 1200 mm: 20050 kg
  - for 1500 mm: 21750 kg

**Input Voltage**

- 3 phases

**Rated Output**

- 377 kW (513 ps) at 1800 min⁻¹
- 335 kW (456 ps) at 1600 min⁻¹
- 293 kW (399 ps) at 1400 min⁻¹

**Fuel Tank Capacity**

- 660 L

**Tag Water**

- 1505 × 755 × 1230 mm
- 300 L
- 405 kg

**Submerged Pump**

- 2300 kg
- 2350 kg

**OP114A**

- AC200V, 50/60Hz, 24KVA or more
- Max. 60 L/min
- Max. 6 MPa

**Outer Dimension**

- Width: 1550 x 755 x 1230 mm
- Water Tank Capacity: 300 L
- Mass (without water): 410 kg

**Performance Comparison of Gyro Piler Models**

With greater torque and chuck rotation speed, F501-G1500 is capable of installing longer tubular piles at a faster rate.

<table>
<thead>
<tr>
<th>Model</th>
<th>F301-G1000</th>
<th>F401-G1200</th>
<th>F501-G1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>4000mm~5300mm</td>
<td>5735mm~7955mm</td>
<td>7000mm~9560mm</td>
</tr>
<tr>
<td>Height</td>
<td>2815mm</td>
<td>3290mm</td>
<td>4310mm</td>
</tr>
<tr>
<td>Width</td>
<td>1800mm</td>
<td>2070mm</td>
<td>2460mm</td>
</tr>
<tr>
<td>Mass</td>
<td>17150kg</td>
<td>3360kg</td>
<td>68600kg</td>
</tr>
<tr>
<td>Max. Press-in Force (without Chuck Rotation)</td>
<td>700kN</td>
<td>2000kN</td>
<td>4000kN</td>
</tr>
<tr>
<td>Max. Extraction Force (without Chuck Rotation)</td>
<td>850kN</td>
<td>2200kN</td>
<td>4500kN</td>
</tr>
<tr>
<td>Chuck Rotation Torque</td>
<td>600kN/m</td>
<td>900kN/m</td>
<td>2200kN/m</td>
</tr>
<tr>
<td>Chuck Rotation Velocity</td>
<td>MAX 10.0min⁻¹</td>
<td>MAX 11.0min⁻¹</td>
<td>MAX 10.0min⁻¹</td>
</tr>
</tbody>
</table>

*The above specifications are subject to alteration without prior notice.*
Standard Accessories

- Piler Stage
  - ST49

- Water Hose Swivel
  - OP149 (for Tubular Pile)

- Water Hose Swivel
  - OP150 (for Driving Attachment)

- Tablet / PC

- Radio Control Shackle (5t)
  - RH5A

- Pile Roller

- Hose Roller

- Pile Laser
  - PL-3

- Lubrication System
  - OP114A

- Module Box
  (from the left, MB17, MB14 and MB15)

Optional Accessories

- Driving Attachment
  - AM171 (ø1200mm)
  - AM172 (ø1500mm)
  - AM173 (ø1800mm)

- Chuck Jaw for Tubular Sheet Pile
  - OP192 (ø1200mm)
  - OP193 (ø1500mm)

- Piler Jet Reel
  - JR19 (with mounting bracket)

- Press-in Piling Total System (PPTS)

  FS01-G1500 monitors real-time press-in data during pile installation.
  The data is automatically converted to SPT N values and recorded on a tablet PC, "G-Terminal".
  This can be used for "as-built information" and "quality assurance" on each project.